(54) Title: A METHOD OF, AND RECEIVER FOR, CANCELLING INTERFERING SIGNALS

(57) Abstract: A method of, and receiver for, cancelling an unwanted first signal having a bandwidth at least a part of which overlies the bandwidth of a wanted second signal, the bandwidth of one of the first and second signals being greater than that of the other. The method comprises receiving the first and second signals (10, 12) and respectively frequency down converting (18,22,26 and 20,24,28) the first and second signals to provide first and second low frequency signals. The first and second low frequency signals are digitised using synchronised ADCs (30,32) to provide respective first and second digitised signals, the wider bandwidth signal being digitised at a higher sampling rate and the lower bandwidth signal being digitised at a lower sampling rate. The sampling rate of one of the first and second digitised signals is adjusted (44) to be the same as the other of the first and second digitised signals. Thereafter the frequency of the unwanted signal is shifted (46) to be in the same relative position with respect to the wanted signal as it appeared in the received signal. An output signal is derived by obtaining the difference (40) between the wanted and unwanted signals. In a refinement of the basic method the unwanted signal from the respective ADC is cleaned-up by demodulating it (52) and modulating it (54) which gives the benefit that when subtracting one signal from the other, the section of the wanted signal under the interferer is left intact.

JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY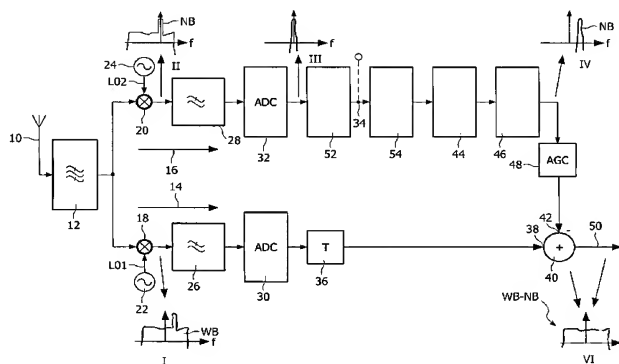, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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